

U.S. COAST GUARD CUTTER WHITE LUPINE (WLM-546)  
U.S. Guard Station Rockland, Maine  
East End of Tillson Avenue  
Rockland  
Knox County  
Maine

HAER No. ME-63

HAER  
ME  
7-ROCLA,  
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PHOTOGRAPHS

WRITTEN HISTORICAL AND DESCRIPTIVE DATA

HISTORIC AMERICAN ENGINEERING RECORD

National Park Service  
Northeast Region  
Philadelphia Support Office  
U.S. Custom House  
200 Chestnut Street  
Philadelphia, Pennsylvania 19106

HAER  
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**HISTORIC AMERICAN ENGINEERING RECORD**  
**U.S. COAST GUARD CUTTER *WHITE LUPINE* (WLM-546)**

**HAER No. ME-63**

**Location:** U.S. Guard Station Rockland, Maine  
East End of Tillson Avenue  
Rockland  
Knox County  
Maine

UTM: 19.491840.4883280  
Quad: Rockland, Maine, 1:24,000

**Date of Construction:** 1943

**Builder:** Erie Concrete & Steel Supply Company, Erie, Pennsylvania

**Present Owner:** U.S. Coast Guard

**Present Use:** Buoy tender

**Significance:** *White Lupine* is significant as one of eight U.S. Navy YF 257-class lighters, designed to provide logistical support to naval operations during World War II. Following the war these vessels were transferred to the U.S. Coast Guard, primarily for aids-to-navigation service.

**Project Information:** *White Lupine* has been determined eligible for listing in the National Register of Historic Places. The vessel was decommissioned on February 27, 1998 and will be transferred from U.S. Government ownership. Since this transfer may have an adverse effect on *White Lupine*, the U.S. Coast Guard requires that the vessel be documented to standards of the Historic American Engineering Record. Written, graphic, and archival photographic documentation was prepared in 1998 by:

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## U.S. COAST GUARD CUTTER *WHITE LUPINE* (WLM-546)

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### DESCRIPTION

*White Lupine* (WLM-546) is a 133-foot long, steel-hulled World War II-era buoy tender that was decommissioned by the U.S. Coast Guard in 1998. *White Lupine* started her career in 1944 as U.S. Navy lighter YF-446. After the conclusion of World War II, YF-446 along with seven sister ships was transferred by the Navy to the Coast Guard in 1947.

Navy YF classifications referred to "covered lighters, self-propelled." During World War II, at least 76 133-foot YF-257-class lighters were constructed for the Navy at various commercial shipyards across the country. They were designed to carry ammunition and cargo from shore to deep-draft vessels anchored offshore. These Navy lighters were well suited for a variety of coastal tasks because their hull design incorporated a shallow draft with a solid engineering plant. All of the 133-foot lighters had sufficient cargo space for storing equipment and an open deck and boom for handling large objects.

Of the eight 133-foot lighters that were transferred to the Coast Guard, four were built in Erie, Pennsylvania and two each were constructed in Buffalo, New York, and Napa, California. All Navy YF 133-foot lighters were similarly designed and built entirely of steel.

YF-446 (*White Lupine*) was 132 feet 10 inches long, with an extreme beam (waterline) of 30 feet 10 inches. She displaced 463 tons loaded, had a limiting draft of 8 feet aft when loaded, and was powered by a diesel-electric propulsion system. *White Lupine* originally was outfitted with twin 600 horsepower Union Diesel Engine Company diesel engines. She was later refitted with two 375 horsepower Caterpillar Diesel engines. *White Lupine* had twin 48 inch diameter, 4-bladed propellers that could generate a maximum speed of 10.5 knots and an economical cruising speed of 5 knots. The vessel had a fuel capacity of 12,500 gallons that allowed a cruising range at an economical speed of 3,192 nautical miles.

She was equipped with two main 60 kw Cummings diesel generators. Once in the Coast Guard she was refitted with a 40-foot long main derrick boom that could lift 22,400 pounds. During her Coast Guard career, a crew of one officer and 23 enlisted men operated the vessel. Throughout her career, *White Lupine* was periodically overhauled and modernized to reflect her evolving missions within the Coast Guard and to remain effective with the advent of more sophisticated shipboard technology. However, she remains representative of the YF 133-foot lighters built for the Navy during World War II.

### HISTORY

The U.S. Coast Guard is responsible for maintaining more than 40,000 navigational aids across the continental United States, Alaska, Hawaii, Puerto Rico, the Virgin Islands, and the U.S. Territories in the Pacific Ocean. These aids-to-navigation include lighthouses, lighted and unlighted buoys, shore lights, ranges, day markers, and long-range electron navigation systems: LORAN and Differential Global Positioning systems.

Originally, the establishment and maintenance of navigational aids fell under the auspices of the U.S. Department of Treasury. In August 1789 the First Congress created the Lighthouse Service, giving it jurisdiction over existing lighthouses and other aids-to-navigation. However, this Treasury Department organization relied almost exclusively on private contractors, often local pilots, to administer the service

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until the 1840s. This localized system was poorly devised and managed. Congress realized a change was needed to establish a national, standardized aids to navigation system. In 1852, a Lighthouse Board was formed to manage the aids-to-navigation system. Although the board remained under the control of the Treasury Department, it was administered primarily by the military services. The board was composed of two officers from the U.S. Army Corps of Engineers, two from the Navy, and two civilian scientists. Junior officers from the Army and Navy served as secretaries.

Shortly thereafter, the Lighthouse Board implemented a standardized plan to manage the nation's lighthouses, lightships and coastal buoys, and channel markers. The Lighthouse Board initiated the transition from sail-powered buoy tenders to steam-powered tenders. In 1857 the Philadelphia Navy Yard built the *Shubrick*, the country's first steam-powered buoy tender. The *Shubrick*, an immediate success, led the transition to a steam-powered fleet. In the years following the Civil War, the Lighthouse Board authorized the purchase of various steamers to handle the installation and maintenance of coastal buoys.

By the start of the twentieth century, responsibility for maintaining and servicing the coastal navigation system continued to expand. The country's coastlines were divided into 12 lighthouse districts, each with an Army or Navy officer assigned as Lighthouse Inspector. Although control of the Lighthouse Service was transferred to the newly created Department of Commerce and Labor in 1903, the Lighthouse Board continued to administer the agency until 1910, when it was replaced by the Bureau of Lighthouses.

The Bureau of Lighthouses expanded into 17 lighthouse districts with 17 different superintendents. Each superintendent was allowed autonomy to design vessels according to regional requirements. Thus, a diverse fleet of tenders was built for the Lighthouse Service. By 1939 when President Roosevelt announced his Reorganization Plan II which merged the Bureau of Lighthouses with the Coast Guard, the service operated 64 buoy tenders, ranging in size from 72 feet to 200 feet. Standardizing the fleet of tenders became a priority. Under Coast Guard supervision, a class of 180-foot seagoing tenders was built to handle deepwater chores. However, the Coast Guard still lacked smaller, shallower draft tenders to maintain navigational aids closer to shore.

In an effort to reevaluate the role and state of the Coast Guard after World War II, Congress funded a thorough investigation of the Coast Guard service. A private management consulting firm, Ebasco Services, Inc. of New York, was charged with making recommendations for improving the efficiency of the service's operations. Among other conclusions, the report found that the Coast Guard was "undermanned and under-equipped to perform efficiently." Several Coast Guard vessels requisitioned into military service during World War II were returned to their former owners or sold, and the oldest cutters and buoy tenders were decommissioned for disposal in 1946.

To replace some of these vessels and to address the overall need to increase their fleet size, the Coast Guard turned to the Navy. The transfer of numerous Navy craft to the Coast Guard was authorized. Among this fleet of transferred vessels were eight steel-hulled, diesel powered 133-foot YF 257-class lighters that were to be converted to buoy tenders. The 133-foot lighters were needed to complement the Coast Guard's larger seagoing buoy tenders in servicing short-range aids-to-navigation, typically ones in coastal waters and harbors. Although these vessels were not designed for Coast Guard service, they proved to be useful acquisitions. Six of the eight 133-footers remained active in the Coast Guard through

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the 1990s (*White Alder* [WLM-541] sank in the Mississippi River in 1968, and *White Bush* [WLM-542] was decommissioned in 1985).

YF-446 was built by the Erie Concrete & Steel Supply Company in Erie, Pennsylvania. The Erie shipyard built 12 133-foot lighters for the Navy during World War II. The keel of YF-446 was laid on April 28, 1943, and the vessel was launched on July 28, 1943. YF-446 underwent her sea trials on Lake Erie in April 1944 and was commissioned into the Navy on May 31, 1944. Her wartime assignment was Naval Station New Orleans. At the completion of World War II, YF-446 was assigned to the 16th Fleet in Texas for decommissioning and storage. On July 17, 1947 YF-446 was stricken from the Naval Register of ships and transferred to the Coast Guard. On September 5, 1947 she was formally commissioned as a Coast Guard cutter and given her present name and mission, that of maintaining aids-to-navigation. Following the custom of the old U.S. Lighthouse Service, YF-446 along with the other seven lighters was affixed with a plant, shrub, or tree name, prefixed by *White*.

Once commissioned into the Coast Guard, *White Lupine* was sent to the Coast Guard Yard at Curtis Bay, Maryland and refitted for buoy tending service. Her deck arrangement was converted to include a large 40-foot long derrick to handle buoys as part of her services required by the Coast Guard. To reflect her transformation to a buoy tender, *White Lupine* was initially designated WAGL, "auxiliary vessel, lighthouse tender." The Coast Guard later changed her designation to WLM, "medium or coastal buoy tender." Like the other 133-footers, *White Lupine* principally performed duty as a buoy tender servicing aids-to-navigation. She also performed search and rescue operations and provided limited ice-breaking duties.

From her commissioning into the U.S. Coast Guard in September 1947 until June 1958, *White Lupine* was assigned to the Coast Guard's 9th District and stationed at Detroit, Michigan. She was transferred in June 1958 to Ogdensburg, New York, on the St. Lawrence River where she remained until November 1967. While stationed at Ogdensburg, she was used to inspect aids-to-navigation on the St. Lawrence Seaway and maintain all Coast Guard aids-to-navigation on Lake Ontario.

In November 1967 she was reassigned to the Coast Guard's 1st District and transferred to Rockland, Maine, where she relieved the 180-foot tender *Laurel* of her aids-to-navigation responsibilities. From 1967 until 1998 *White Lupine* remained homeported at Rockland and was responsible for maintaining 417 buoys along Maine's Atlantic coast from Portland to Calais at the Canadian border. In addition she serviced buoys on several of the major rivers in Maine, including the Penobscot, Kennebec, Damariscotta, New Meadows, Sheepscot, and Saint Croix. *White Lupine* was also used to resupply many of the lighthouses on the Maine coast. Upon decommissioning, her Coast Guard duties were assumed by two of the Coast Guard's newest Keeper-Class tenders, *Marcus Hanna* and *Abbie Burgess*.

NOTE: See HAER No. MA-150, U.S. Coast Guard Cutter *White Heath* (WLM-546), another 133-foot class buoy tender.

## SOURCES OF INFORMATION/BIBLIOGRAPHY

### A. Drawings

Approximately 12 drawings of the U.S.C.G.C. *White Lupine* (WLM-546) showing "as built," as well as altered, conditions are the property of the U.S. Coast Guard and are on file at the Technical Information Branch, Commanding Office, U.S. Coast Guard Engineering Logistics Center, Baltimore, Maryland.

### B. Historic Photographs

Approximately 35 photographs of the U.S.C.G.C. *White Lupine* (WLM-546), dating between 1950 and 1987, are the property of the U.S. Coast Guard and are on file at the Ships History Section, U.S. Coast Guard Historian's Office, U.S. Coast Guard Headquarters, Washington, D.C.

### C. Bibliography

#### 1. Published Works

Johnson, Robert E.

1987 *Guardians of the Sea, History of the United States Coast Guard 1915 to the Present.* Naval Institute Press. Annapolis, Maryland.

Scheina, Robert L.

1990 *U.S. Coast Guard Cutters & Craft, 1946-1990.* Naval Institute Press. Annapolis, Maryland.

#### 2. Unpublished Works

Cowart, K.K.

1958 "Development of Vessels Servicing Aids to Navigation for the U.S. Coast Guard." Paper presented at the annual meeting of the Society of Naval Architects and Marine Engineers, November 13-14.

U.S. Coast Guard

Ship's Characteristics Card—USCGC *White Lupine* WLM-546. On file at U.S. Coast Guard Historian's Office, Washington, D.C.

1998 USCGC *White Lupine* (WLM-546) Decommissioning Statement. On file at U.S. Coast Guard Historian's Office, Washington, D.C.

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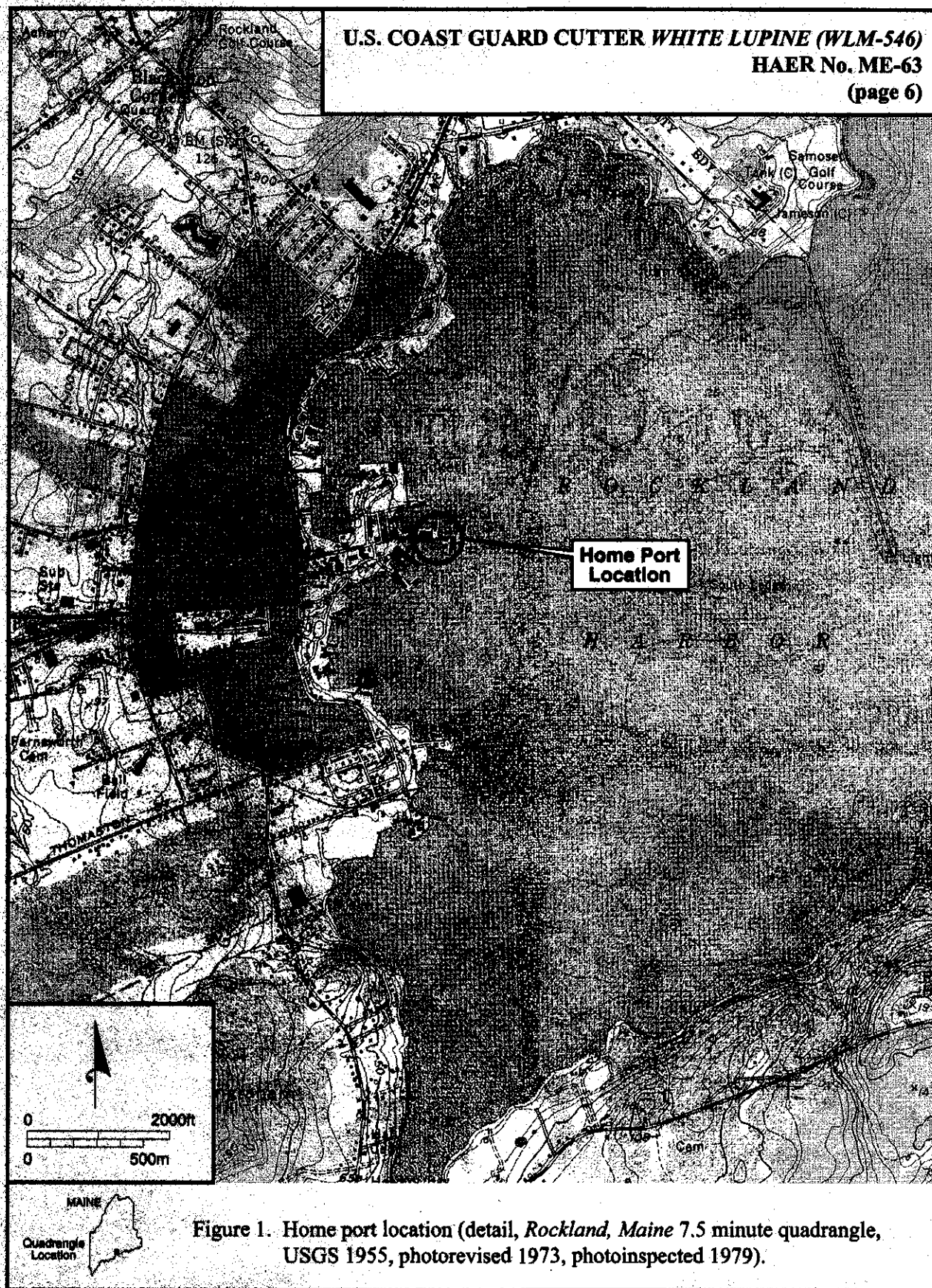


Figure 1. Home port location (detail, Rockland, Maine 7.5 minute quadrangle, USGS 1955, photorevised 1973, photoinspected 1979).